

EROSION AND SEDIMENT CONTROL PLAN:

REFERENCE IS MADE TO:

- 1. Connecticut Guidelines for Soil Erosion and Sediment Control 2002 (2002 Guidelines)
- 2. U.S.D.A. N.R.C.S. Web Soil Survey.

DEVELOPMENT CONTROL PLAN

- 1. Development of the site will be performed by the Contractor, who will be responsible for the installation and maintenance of erosion and sediment control measures required throughout
- 2. The sedimentation control mechanisms shall remain in place from start of construction until permanent vegetation has been established. The representative for the Town of Voluntown will be notified when sediment and erosion control structures are initially in place. Any additional soil & erosion control measures requested by the Town or its agent, shall be installed immediately. Once the proposed development, seeding and planting have been completed, the representative shall again be notified to inspect the site. The control measures will not be removed until this
- 3. All stripping is to be confined to the immediate construction area. Topsoil shall be stockpiled so that slopes do not exceed 2 to 1. A hay bale sediment barrier is to surround each stockpile and a temporary vegetative cover shall be provided.
- 4. Dust control will be accomplished by spraying with water. The application of calcium chloride is not permitted adjacent to wetland resource areas or within 100' of these areas.
- The proposed planting schedule is to be adhered to during the planting of disturbed areas throughout the proposed construction site.
- 6. Final stabilization of the site is to follow the procedures outlined in "Permanent Vegetative Cover" If necessary a temporary vegetative cover is to be provided until a permanent cover can be

SILT FENCE INSTALLATION AND MAINTENANCE:

- 1. Dig a 6" deep trench on the uphill side of the barrier location
- 2. Position the posts on the downhill side of the barrier and drive the posts 1.5 feet into the
- 3. Lay the bottom 6" of the fabric in the trench to prevent undermining and backfill.
- 4. Inspect and repair barrier after heavy rainfall.
- 5. Inspections will be made at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater to determine maintenance needs.
- 6. Sediment deposits are to be removed when they reach a height of 1 foot behind the barrier or half the height of the barrier and are to be deposited in an area which is not regulated by the
- 7. Replace or repair the fence within 24 hours of observed failure. Failure of the fence has occurred when sediment fails to be retained by the fence because:
- the fence has been overtopped, undercut or bypassed by runoff water, the fence has been moved out of position (knocked over), or
 the geotextile has decomposed or been damaged.

HAY BALE INSTALLATION AND MAINTENANCE:

- 1. Bales shall be placed as shown on the plans with the ends of the bales tightly abutting each
- 2. Each bale shall be securely anchored with at least 2 stakes and gaps between bales shall be wedged with straw to prevent water from passing between the bales.
- 3. Inspect bales at least once per week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inches or greater to determine maintenance needs.
- 4. Remove sediment behind the bales when it reaches half the height of the bale and deposit in an area which is not regulated by the Inland Wetlands Commission
- 5. Replace or repair the barrier within 24 hours of observed failure. Failure of the barrier has occurred when sediment fails to be retained by the barrier because:
- the barrier has been overtopped, undercut or bypassed by runoff water, the barrier has been moved out of position, or
 the hay bales have deteriorated or been damaged.
- **TEMPORARY VEGETATIVE COVER:**

Grass species shall be appropriate for the season and site conditions. Appropriate species are TIMING CONSIDERATIONS

Seed with a temporary seed mixture within 7 days after the suspension of grading work in disturbed areas where the suspension of work is expected to be more than 30 days but less than 1 year.

Install needed erosion control measures such as diversions, grade stabilization structures, sediment basins and grassed waterways.

Grade according to plans and allow for the use of appropriate equipment for seedbed preparations, mulch application, and mulch anchoring.

Loosen the soil to a depth of 3-4 inches with a slightly roughened surface. If the area has been recently loosened or disturbed, no further roughening is required. Soil preparation can be accomplished by tracking with a bulldozer, discing, harrowing, raking or dragging with a section of chain link fence. Avoid excessive compaction of the surface by equipment traveling back and forth over the surface. If the slope is tracked, the cleat marks shall be perpendicular to the anticipated direction of the flow of surface water.

If soil testing is not practical or feasible on small or variable sites, or where timing is critical, fertilizer may be applied at the rate of 300 pounds per acre or 7.5 pounds per 1,000 square feet of 10—10—10 or equivalent. Additionally, lime may be applied using rates given in Figure TS—1 in the

Apply seed uniformly by hand cyclone seeder, drill, cultipacker type seeder or hydroseeder at a minimum rate for the selected species. Increase seeding rates by 10% when hydroseeding.

Temporary seedings made during optimum seeding dates shall be mulched according to the recommendations in the 2002 Guidelines. When seeding outside of the recommended dates, increase the application of mulch to provide 95%—100% coverage. MAINTENANCE

Inspect seeded area at least once a week and within 24 hours of the end of a storm with a rainfall amount of 0.5 inch or greater for seed and mulch movement and rill erosion.

Where seed has moved or where soil erosion has occurred, determine the cause of the failure. Repair eroded areas and install additional controls if required to prevent reoccurrence of erosion.

Continue inspections until the grasses are firmly established. Grasses shall not be considered established until a ground cover is achieved which is mature enough to control soil erosion and to survive severe weather conditions (approximately 80% vegetative cover).

PERMANENT VEGETATIVE COVER:

Refer to Permanent Seeding Measure in the 2002 Guidelines for specific applications and details related to the installation and maintenance of a permanent vegetative cover. In general, the following sequence of operations shall apply:

- 1. Topsoil will be replaced once the excavation and grading has been completed. Topsoil will be spread at a minimum compacted depth of 4".
- 2. Once the topsoil has been spread, all stones 2" or larger in any dimension will
- 3. Apply agricultural ground limestone at a rate of 2 tons per acre or 100 lbs. per 1000 s.f. Apply 10—10—10 fertilizer or equivalent at a rate of 300 lbs. per acre or 7.5 lbs. per 1000 s.f. Work lime and fertilizer into the soil to a depth of 4".
- 4. Inspect seedbed before seeding. If traffic has compacted the soil, retill compacted areas.
- 5. Apply the chosen grass seed mix. The recommended seeding dates are: April 1 to June 15 & August 15 - October 1.
- 6. Following seeding, firm seedbed with a roller. Mulch immediately following seeding. If a permanent vegetative stand cannot be established by Septembe 30, apply a temporary cover on the topsoil such as netting, mat or organic

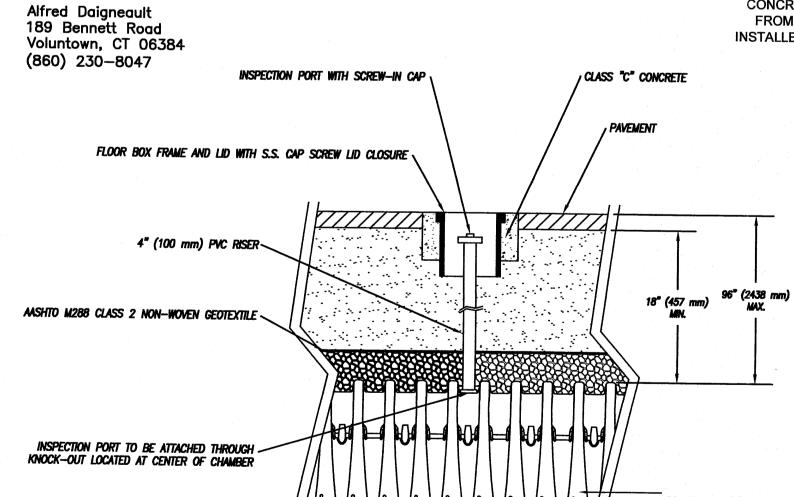
DEVELOPMENT SCHEDULE/SEQUENCE OF OPERATIONS:

- 1. Flag the limits of disturbance and schedule preconstruction meeting with Town of Voiuntown wetlands Agent.
- 2. Contact utility companies for scheduling installation of utilities and connections
- 3. Install the anti-tracking construction entrance.
- 4. Cut trees within the defined clearing limits and remove the cut wood. 5. Install perimeter erosion and sedimentation controls in accordance with the site
- development plan.
- 6. Chip brush and slash, stockpile chips for use on site or remove off site.
- 7. Box out driveway and stockpile topsoil in locations shown on the plans. Install erosion controls around stockpiles and apply temporary seeding.
- 8. Install and compact processed gravel for driveway base
- 9. Remove tree stumps and dispose of at an approved disposal site. Alternatively, stumps may be chipped in place. No stumps shall be buried on site.
- 10. Strip and stockpile topsoil that is within the footprint of the site. Surround stockpile with silt fence or staked haybales, and apply temporary seeding in accordance with recommended mixtures. Divert runoff around the perimeter of
- 11. Make all required cuts and fills. Establish the subgrade for the driveway as required and install additional erosion controls as necessary and as shown on
- 12. Inspect perimeter erosion and sedimentation controls weekly and after rain events in excess of 0.5". Repair any damaged controls and provide additional erosion control devices as necessary to address areas of concentrated runoff that may develop as a result of the construction activities. The contractor shall review discharge conditions with the design engineer or the Town of Voluntown prior to installing additional erosion controls. Apply water as necessary for dust control

13.Install utilities to edge of right-of-way.

- 14. Prepare sub-base for driveway and remainder of the site for final grading. 15. Excavate for building footings, stockpile soil and pour footings & slab. Begin building construction
- 16. Place topsoil where required and install any proposed landscaping upon completion of each building.
- 17. Install first course of pavement to each building as they are completed.
- 18. When the remainder of the site work is near completion, sweep all paved areas for the final course of paving. Inspect erosion controls and remove any
- accumulated sediment. 19. Install final course of pavement upon the completion of the final structure
- rake, seed and mulch to within 2' of the pavement
- 21. Remove and dispose of all silt fence and hay bales after the site has been stabilized to the satisfaction of the Town of Voluntown.

RESPONSIBLE PARTY FOR E&S MAINTENANCE:



SC-780 CHAMBER

INSPECTION PORT

BEFORE YOU DIG CALL BEFORE YOU DIG

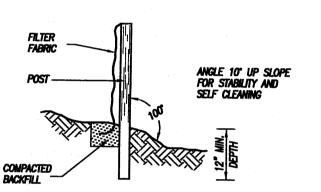
AASHTO M288 CLASS 2

AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING OR DISTURBING EARTH DIAL 811 OR 1-800-922-4455

CONSTRUCTION NOTES/GENERAL PROVISIONS

- 1. The locations of existing utilities are based upon visible field observations, record mapping and interviews with the property owner and abutting property owners. They are is shown for informational purposes only. Contractor shall coordinate exploratory test hole excavation with the Engineer if necessary to verify and/or determine actual locations of some utilities & structures. is the responsibility of the contractor to verify the location and elevation of all utilities. Contact "CALL BEFORE YOU DIG" at 1-800-922-4455, and obtain all applicable permits, prior to any excavation
- 2. All existing site features not scheduled to remain shall be removed and disposed of in a proper manner, by the contractor.
- 3. All Materials and methods of construction shall conform to "State of Connecticut, Department of Transportation, Standard Specifications for Roads. Bridges and Incidental Construction, Form 817", and
- 4. The Contractor shall obtain copies of all regulatory agency permits from the Owner prior to any site disturbance.
- 5. Unless otherwise noted on the plans, the contractor shall use the geometry provided on the construction plans. Benchmark information shall be provided to the contractor by the Owner or the Owner's surveyor. Any discrepancies between field measurements and construction plan information shall be brought to the attention of the Engineer
- 6. The Contractor shall not revise elevations or locations of items shown on the plans without written consent of the project Engineer or
- 7. The Contractor shall protect benchmarks, property corners, and other survey monuments from damage or displacement. If a marker needs to be removed, it shall be referenced by a licensed land surveyor and replaced as necessary by the same.
- 8. The Contractor shall be responsible for preparing and compacting base for proposed pavement.

 Owner shall provide general fill to establish subgrade — contractor shall spread and compact. Contractor shall provide, spread and compact required processed aggregate
- 9. The entire project site shall be thoroughly cleaned at the completion of the work. Clean all installed paved areas, accumulated silt and sediment, plus all adjacent areas affected by the construction activities as directed by the Owner or the iurisdictional Agency.



SILT FENCE

NOT TO SCALE

DEEP TEST HOLE EVALUATION - Sept 21, 2017 Uncas Health District

ST PIT	<u>DEPTH</u>	PROFILE
1	0"-106" No Ledge or	Medium Sand & Gravel Mottling
2	0"— 8" 8"— 21" 21"— 43" 43"— 87" Ledge GWT Mottling	Topsoil Very fine loamy sand/silty Compact very fine loamy sand/mottled/ro Hardpan/wet N/A 79" seepage © 48" 21"
3	0*- 8*	Topsoil

8"- 23" Very fine loamy sand 23"- 34" Compact very fine loamy sand/gravelly 34"-- 85" Hardpan/wet/mottled Ledge GWT

77" seepage **©** 44"

3. STORMTECH'S REQUIREMENTS FOR SYSTEMS WITH PAVEMENT DESIGN (ASPHALT, CONCRETE PAVERS, ETC.):MINIMUM COVER IS 18" (457 mm) NOT INCLUDING PAVEMENT: MAXIMUM COVER IS 96" (2438 mm) INCLUDING PAVEMENT. FOR INSTALLATIONS THAT DO NOT INCLUDE PAVEMENT. WHERE RUTTING FROM VEHICLES MAY OCCUR. MINIMUM REQUIRED COVER IS 24" (610 mm), MAXIMUM COVER IS 96" (2438 mm).

INSTRUCTIONS

COVER ENTIRE ROW WITH

AASHTO M288 CLASS 2

- 4. THE CONTRACTOR MUST REPORT ANY DISCREPANCIES WITH CHAMBER FOUNDATION MATERIALS BEARING CAPACITIES TO THE DESIGN ENGINEER
- 5. AASHTO M288 CLASS 2 NON-WOVEN GEOTEXTILE (FILTER FABRIC) MUST BE USED AS INDICATED IN THE PROJECT PLANS.

— ALTERNATE CONSTRUCTION WITH FULL CURB BACK TO BE USED AT LOCATIONS ADJACENT TO EXISTING OR PROPOSED CUR

| 3'-1ま* // | 3'-1ま* // | -2*

6'-6 t

SECTION A-A

2- #4 BARS 7 3-10" LONG

STORMTECH GENERAL NOTES

1. STORMTECH REQUIRES INSTALLING CONTRACTORS TO USE

2. OUR TECHNICAL SERVICES DEPARTMENT OFFERS

AND UNDERSTAND STORMTECH'S LATEST INSTALLATION

INSTRUCTIONS PRIOR TO BEGINNING SYSTEM INSTALLATION

INSTALLATION CONSULTATIONS TO INSTALLING CONTRACTORS

LEAST 30 DAYS PRIOR TO SYSTEM INSTALLATION TO ARRANGE

A PRE-INSTALLATION CONSULTATION, OUR REPRESENTATIVES

CAN THEN ANSWER QUESTIONS OR ADDRESS COMMENTS ON

THE STORMTECH CHAMBER SYSTEM AND INFORM THE

REQUIREMENTS BEFORE BEGINNING THE SYSTEM'S

CONSTRUCTION, CALL 1-888-892-2694 TO SPEAK TO A

INSTALLING CONTRACTOR OF THE MINIMUM INSTALLATION

TECHNICAL SERVICES REPRESENTATIVE OR VISIT WWW.

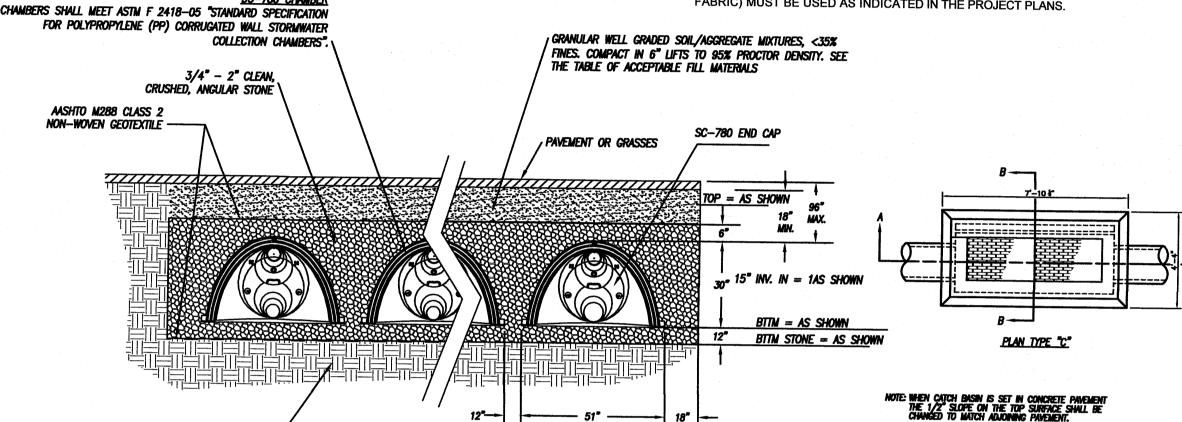
STORMTECH.COM TO RECEIVE A COPY OF OUR INSTALLATION

CONTACT OUR TECHNICAL SERVICES REPRESENTATIVE AT

- 6. STONE PLACEMENT BETWEEN CHAMBERS ROWS AND AROUND PERIMETER MUST FOLLOW INSTRUCTIONS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- BACKFILLING OVER THE CHAMBERS MUST FOLLOW REQUIREMENTS AS INDICATED IN THE MOST CURRENT VERSION OF STORMTECH'S INSTALLATION INSTRUCTIONS.
- 8. THE CONTRACTOR MUST REFER TO STORMTECH'S INSTALLATION INSTRUCTIONS FOR A TABLE OF ACCEPTABLE VEHICLE LOADS AT VARIOUS DEPTHS OF COVER. THIS INFORMATION IS ALSO AVAILABLE AT STORMTECH'S WEBSITE: WWW.STORMTECH.COM. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING VEHICLES THAT EXCEED STORMTECH'S REQUIREMENTS FROM TRAVELING ACROSS OR PARKING OVER THE STORMWATER SYSTEM. TEMPORARY FENCING, WARNING TAPE AND APPROPRIATELY LOCATED SIGNS ARE COMMONLY USED TO PREVENT UNAUTHORIZED VEHICLES FROM ENTERING SENSITIVE CONSTRUCTION AREAS.
- 9. THE CONTRACTOR MUST APPLY EROSION AND SEDIMENT CONTROL MEASURES TO PROTECT THE STORMWATER SYSTEM DURING ALL PHASES OF SITE CONSTRUCTION PER LOCAL CODES AND DESIGN ENGINEER'S SPECIFICATIONS.
- 10. STORMTECH PRODUCT WARRANTY IS LIMITED. SEE CURRENT PRODUCT WARRANTY FOR DETAILS. TO ACQUIRE A COPY CALL STORMTECH AT 1-888-892-2694 OR VISIT WWW.STORMTECH.COM

2 5/8" DIA. HOLES FOR

SPECIFICALLY ORDERED
OTHERWISE UNDER TRAVELWAY
1'-7'2 UNDER UNTRAVELED
AREAS 0'-3"



STORMTECH DC-780 SYSTEM

NOT TO SCALE

DESIGN ENGINEER IS RESPONSIBLE FOR ENSURING THI

REQUIRED BEARING CAPACITY OF SUBGRADE SOILS

THIS CROSS SECTION DETAILS THE REQUIREMENTS NECESSARY TO SATISFY THE LOAD FACTORS SPECIFIED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12 FOR EARTH AND LIVE LOADS USING STORMTECH CHAMBERS INSPECTION PORT T.F.= PER PLAN

NON-WOVEN GEOTEXTILE OR EQUAL DC-780: 8' WIDE STRIP **CONCRETE WEIR SET 45°** FROM FLOW DIRECTION INSTALLED TO BOTTOM OF **MANHOLE** F/L=AS SHOWN 8" INLET F/L=AS SHOWN SUMP ELEV - STORMTECH ENDCAP AASHTO M288 CLASS 1 WOVEN GEOTEXTILE OR EQUAL BETWEEN FOUNDATION STONE AND CHAMBERS

DC-780: 5'-6" WIDE STRIP **ISOLATOR ROW PROFILE**

STORMTECH MAINTENANCE PROCEDURE

At a minimum, StormTech recommends annual inspections. Initially, the Isolator Row should be inspected every 6 months for the first year of operation. For subsequent years, the inspection should be adjusted based upon previous observation of sediment deposition.

If upon visual inspection it is found that sediment has accumulated, a stadia rod should be inserted to determine the depth of sediment.

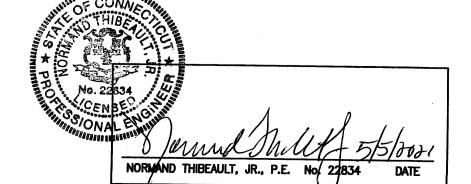
When the average depth of sediment exceeds 3 inches throughout the length of the Isolator Row, clean—out should be performed.

Maintenance is accomplished with the JetVac process. The Jet Vac process utilizes a high pressure water nozzle to propel itself down the Isolator Row while scouring and suspending sediments. As the nozzle is retrieved, the captured pollutants are flushed back into the manhole Step 1) Inspect Isolator Row for sediment A) Inspection ports (if present)
i. Remove lid from floor box from

ii. Remove cap from inspection riser
iii. Using a flashlight and stadia rod,
measure depth of sediment and record results on maintenance log.
iv. If sediment is at, or above, 3 inch depth proceed to Step 2. If not proceed to step 3 i. Remove cover from manhole at upstream end of Isolator Row
ii. Using a flashlight, inspect down Isolator Row through outlet pipe
1. Mirrors on poles or cameras may be used to avoid a confined space entry
2. Follow OSHA regulations for confined space entry if entering manhole iii. If sediment is at or above the lower row of sidewall holes (approximately 3 inches) proceed to Step 2. Step 2) Clean out Isolator Row using the JetVac process A) A fixed culvert cleaning nozzle with rear facing nozzle spread of 45 inches or more is preferable B) Apply multiple passes of JetVac until backflush water is clean C) Vacuum manhole sump as required Step 3) Replace all caps, lids and covers, record observations and actions

Step 4) Inspect & clean catch basins and manholes upstream of the StormTech system

FOR REVIEW ONLY NOT FOR CONSTRUCTION



5/03/2021 FINAL PLAN REVIEW 1/26/2021 SIGHTLINE DEMONSTRATION & EASEMENT ADDED 7/14/2020 INTERNAL REVIEW DATE DESCRIPTION **REVISIONS**

SECTION B-B

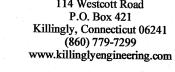
TYPE 'C' CATCH BASIN DOUBLE GRATE - TYPE II

DETAIL SHEET No. PREPARED FOR

ALFRED L. DAIGNEAULT & TAMMY DAIGNEAULT

15 PRESTON CITY ROAD (ROUTE 165) & PENDLETON HILL ROAD (ROUTE 49) VOLUNTOWN, CONNECTICUT

Killingly Engineering Associates Civil Engineering & Surveying



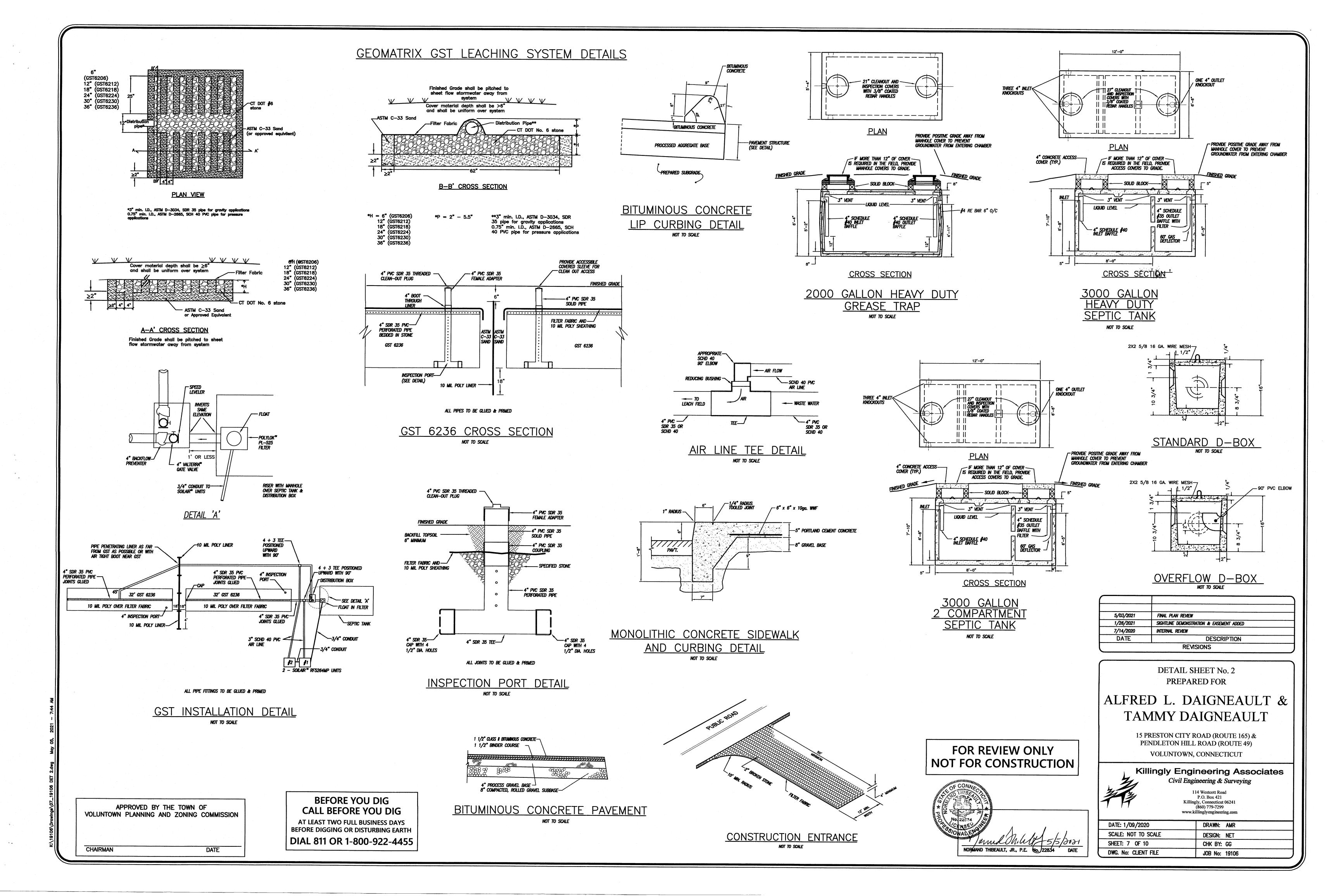
DATE: 1/09/2020 DRAWN: AMR SCALE: NOT TO SCALE DESIGN: NET SHEET: 6 OF 10 CHK BY: GG DWG. No: CLIENT FILE JOB No: 19106

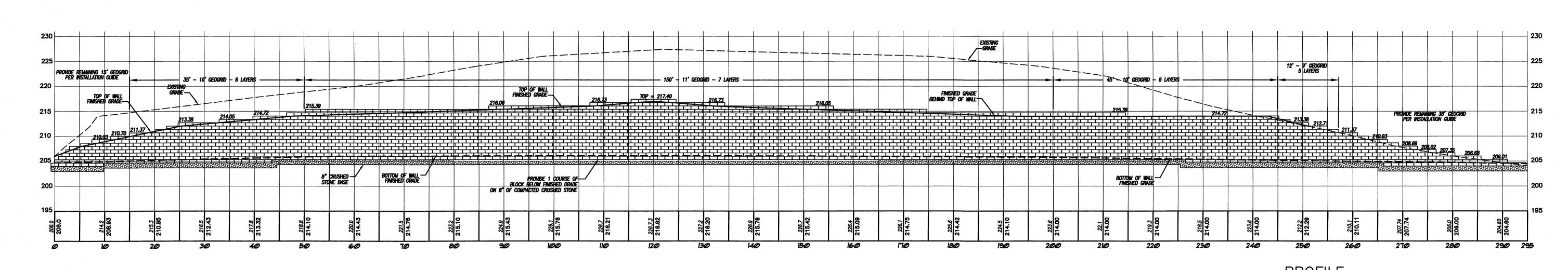
CHAIRMAN

APPROVED BY THE TOWN OF

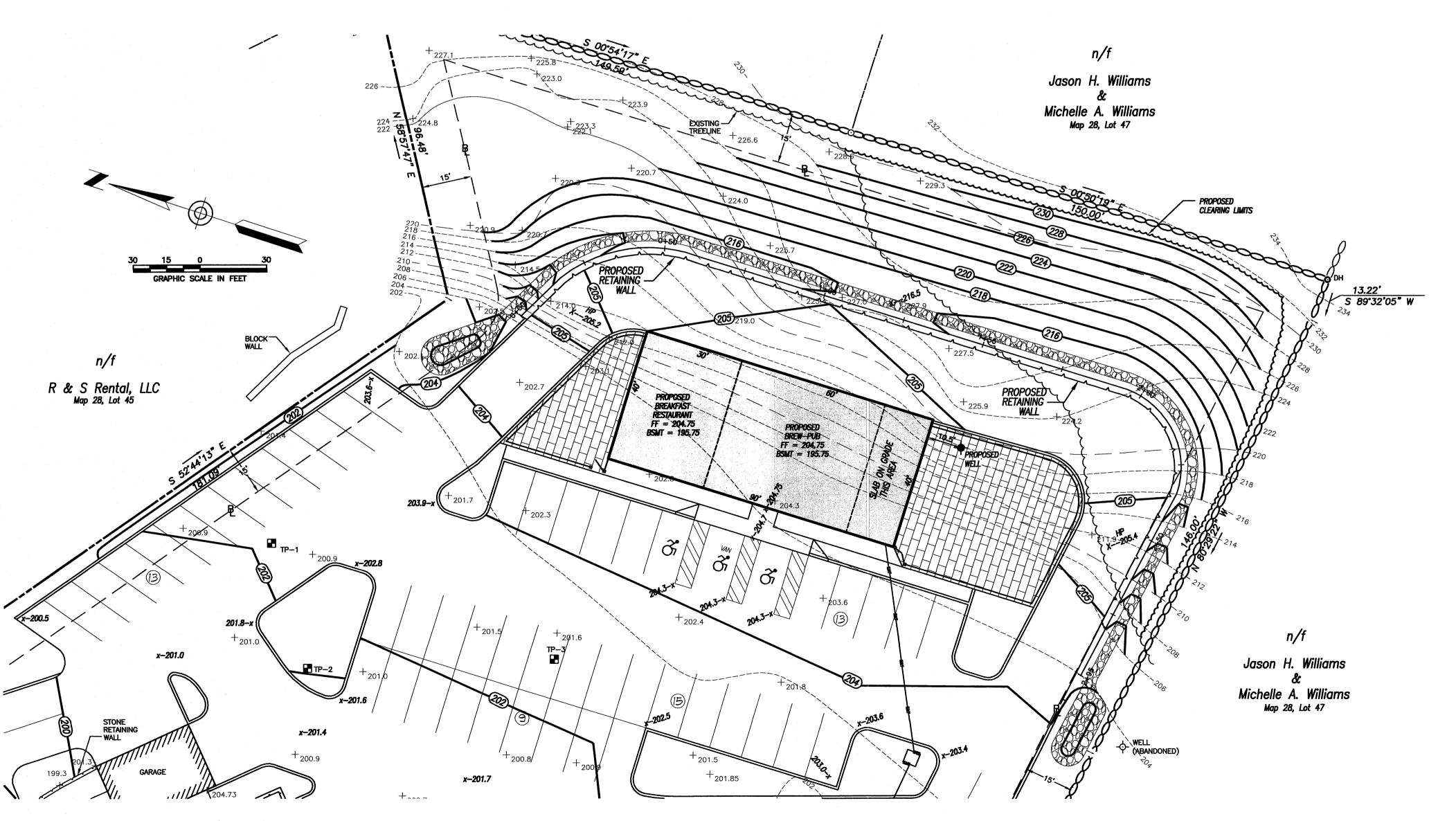
VOLUNTOWN PLANNING AND ZONING COMMISSION

DATE





VERTICAL SCALE IN FEET



GEOGRID INSTALLATION GUIDE

EXPOSED HEIGHT (FT)	TOTAL HEIGHT (FT)	NUMBER OF COURSES	GRID LAYERS	LENGTH (FT)	1	2	PLACE 3		R NUMB F ELEVAT) 7
2.3 2.8 3.3 3.8 4.3 4.8 5.3 5.8 6.3 6.8 7.3 7.8 8.3	2.8 3.3 3.8 4.3 4.8 5.3 5.8 6.3 7.3 7.8 8.3 8.8 9.3	5 6 7 8 9 10 11 12 14 15 16 17	1 2 2 2 2 2 3 3 4 4 4 4 4 5	4 4 4 5 5 6 6 6 7 8 8 8 9	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	- 2 2.5 3 3 3 3 3 3 3	- - - - - 4.5 5 5 5 5 5 5	- - - - - 6 6.5 7 7	- - - - - - - - - 8	- - - - - - - - -	7
8.8 9.3 9.8 10.3 10.8 11.3	9.8 10.3 10.8 11.3 11.8 12.3	19 20 21 22 23 24	5 5 7 7 7	9 10 10 10 11 11	1 1 1 1	3 3 2 2 2 2	5 5 5 3 3 3	7 7 5 5 5	8.5 9 9 7 7 7	- - 9 9 9	- - 10 10.5 11

FINAL PLAN REVIEW
SIGHTLINE DEMONSTRATION & EASEMENT ADDED
INTERNAL REVIEW
DESCRIPTION
REVISIONS

RETAINING WALL DESIGN PLAN PREPARED FOR

ALFRED L. DAIGNEAULT & TAMMY DAIGNEAULT

15 PRESTON CITY ROAD (ROUTE 165) & PENDLETON HILL ROAD (ROUTE 49) VOLUNTOWN, CONNECTICUT

Killingly Engineering Associates

Civil Engineering & Surveying



114 Westcott Road P.O. Box 421 Killingly, Connecticut 06241 (860) 779-7299 www.killinglyengineering.com

DATE: 1/09/2020	DRAWN: AMR				
SCALE: NOT TO SCALE	DESIGN: NET				
SHEET: 8 OF 10	CHK BY: GG				
DWG. No: CLIENT FILE	JOB No: 19106				

BEFORE YOU DIG APPROVED BY THE TOWN OF VOLUNTOWN PLANNING AND ZONING COMMISSION **CALL BEFORE YOU DIG** AT LEAST TWO FULL BUSINESS DAYS BEFORE DIGGING OR DISTURBING EARTH DIAL 811 OR 1-800-922-4455 <u>PLAN VIEW</u>

FOR REVIEW ONLY

NOT FOR CONSTRUCTION

